UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,622	01/26/2004	Beat Stamm	14984.36	8918

47973	7590	06/03/2005

WORKMAN NYDEGGER/MICROSOFT
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UT 84111

EXAMINER
WANG, JIN CHENG

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	10/764,622	STAMM ET AL.
Office Action Summary	Examiner	Art Unit
	Jin-Cheng Wang	2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *1/26/2004.*

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 1/26/2004 has been considered

by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaasila U.S.

Patent No. 5,155,805 (hereinafter Kaasila).

Claim 1:

Kaasila discloses that, in a computing system that has access to a set of control points, the

set of control points for generating an outline of a graphical object, the outline being utilized to

determine how the graphical object is rendered on a pixel grid, the location of some control

points being constrained to pre-determined locations, a computerized method for dynamically

determining one or more directions of freedom for a control point such that the control point can

be moved to comply with a corresponding one or more constraints, *the method comprising*:

Identifying a first function (*functions are described in column 9, lines 41-67*) that

represents a first constraint (*e.g., a first constraint being a distance constraint wherein the*

projection vector specifies in distance between the original position of the control point and the

desired position of the control point; see column 9-10), solutions to the first function indicating

compliance with the first constraint (e.g., *the new positions of control point depend upon the*

freedom vector and the projection vector which are automatically determined by the routines

and functions as disclosed in column 9-10 such that the distance constraint is satisfied to the

extent that the distance between the desired position of the control point and the original

position of the control point is reduced to the minimum possible value; column 9-10);

Calculating, based on the location of the control point and the identified first function

(e.g., *the first function is automatically identified depending upon the location of the control*

point, the freedom vector and the projection vector; column 9-10), that the control point does not

comply with the first constraint (*the original control point does not comply with the distance*

constraint as specified such that the distance between the desired control point and the original

control point is reduced to a minimum possible; column 9-10), and

automatically determining a first direction of freedom in which the control point can be

moved to comply with the first constraint such that movement of the control point in the first

direction of freedom has a reduced likelihood of causing non-compliance with other constraints

(e.g., *the new positions of control point depend upon the freedom vector and the projection*

vector which are automatically determined by the routines and functions as disclosed in column

9-10 and the step of adjusting the position of the control point along the freedom vectors until a

balance of the diagonal stroke weight of letter "Y" is achieved, i.e., other constraints associated

with the other control points can be satisfied; column 9-10).

Claim 2:

The claim 2 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of processing instructions included in a set of control points. However, Kaasila further discloses the claim limitation of processing instructions included in a set of control points (column 10, lines 1-45; see also column 7-8).

Claim 3:

The claim 3 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of identifying a first function that represents one of a distance constraint and a proportion constraint. However, Kaasila further discloses the claim limitation of identifying a first function that represents one of a distance constraint and a proportion constraint (*(e.g., a first constraint being a distance constraint wherein the projection vector specifies in distance between the original position of the control point and the desired position of the control point; see column 9-10*).

Claim 4:

The claim 4 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of determining that using the control point as input to the first function does not result in a value that approximates a zero for the first function. However, Kaasila further discloses the claim limitation of determining that using the control point as input to the first function does not result in a value that approximates a zero for the first function (*e.g., moving the control point a predetermined distance being non-zero so that the control point can be moved and applying font instructions including Delta exceptions and projection and freedom vectors to adjust the diagonal stroke of "Y"; see column 10, lines 1-45*).

Claim 5:

The claim 5 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of determining that the first direction of is to be in the direction of an X-axis. However, Kaasila further discloses the claim limitation of determining that the first direction of is to be in the direction of an X-axis (*e.g., column 9, lines 23-62*).

Claim 6:

The claim 6 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of determining that the first direction of is to be in the direction of an Y-axis. However, Kaasila further discloses the claim limitation of determining that the first direction of is to be in the direction of an Y-axis (*e.g., the freedom and projection vectors are set to the y-axis; see column 10, lines 1-45*).

Claim 7:

The claim 7 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of moving the control point in the first direction of freedom to comply with the first constraint. However, Kaasila further discloses the claim limitation of moving the control point in the first direction of freedom to comply with the first constraint (e.g., *the new positions of control point depend upon the freedom vector and the projection vector which are automatically determined by the routines and functions as disclosed in column 9-10 and the step of adjusting the position of the control point along the freedom vectors until a balance of the diagonal stroke weight of letter "Y" is achieved, i.e., other constraints associated with the other control points can be satisfied; column 7-10*).

Claim 8:

The claim 8 encompasses the same scope of invention as that of the claim 1 except

additional claim limitation of measuring a first angle between a first direction of compliance and

a first axis; measuring a second angle between the first direction of compliance and the second

axis; and determining that the first angle is smaller than the second angle. However, Kaasila

further discloses the claim limitation of measuring a first angle between a first direction of

compliance and a first axis; measuring a second angle between the first direction of compliance

and the second axis; and determining that the first angle is smaller than the second angle (*e.g.*,

column 10, lines 1-45).

Claim 9:

The claim 8 encompasses the same scope of invention as that of the claim 8 except

additional claim limitation of identifying a second function that represents a second constraint,

solutions to the second function indicating compliance with the second constraint; and setting a

second direction of freedom perpendicular to the first direction of compliance, the second

direction of freedom indicating a direction in which the control point can move to comply with

the second constraint. However, Kaasila further discloses the claim limitation of identifying a

second function that represents a second constraint, solutions to the second function indicating

compliance with the second constraint; and setting a second direction of freedom perpendicular

to the first direction of compliance, the second direction of freedom indicating a direction in

which the control point can move to comply with the second constraint (*e.g., column 10, lines 1-*

45).

Claim 10:

The claim 10 encompasses the same scope of invention as that of the claim 9 except

additional claim limitation of setting the second direction of freedom to the direction of the

second axis. However, Kaasila further discloses the claim limitation of setting the second

direction of freedom to the direction of the second axis by applying font instructions (column 9-

10).

Claim 11:

The claim 11 encompasses the same scope of invention as that of the claim 10 except

additional claim limitation of setting the second direction of freedom to the direction of an X-

axis. However, Kaasila further discloses the claim limitation of setting the second direction of

freedom to the direction of an X-axis (*e.g., Repeating the step of moving the control point and*

setting the direction of freedom vector until a balance of the diagonal stroke weight of letter "Y"

is achieved including setting the freedom vector to the x-axis by the application of font

instructions; see column 9-10).

Claim 12:

The claim 12 encompasses the same scope of invention as that of the claim 10 except

additional claim limitation of setting the second direction of freedom to the direction of an Y-

axis. However, Kaasila further discloses the claim limitation of setting the second direction of

freedom to the direction of an Y-axis (*e.g., Repeating the step of moving the control point and*

setting the direction of freedom vector until a balance of the diagonal stroke weight of letter "Y"

is achieved including setting the freedom vector to the y-axis by the application of font

instructions; see column 9-10).

Claim 13:

The claim 13 encompasses the same scope of invention as that of the claim 9 except additional claim limitation of setting the second direction of freedom to a diagonal direction. However, Kaasila further discloses the claim limitation of setting the second direction of freedom to a diagonal direction (*e.g., Repeating the step of moving the control point and setting the direction of freedom vector until a balance of the diagonal stroke weight of letter "Y" is achieved including setting the freedom vector to the diagonal direction in relation to the projection vector by the application of font instructions; see column 9-10*).

Claim 14:

The claim 14 encompasses the same scope of invention as that of the claim 9 except additional claim limitation of moving the control point along the second direction of freedom to comply with the second constraint in a manner that does not result in non-compliance with the first constraint. However, Kaasila further discloses the claim limitation of moving the control point along the second direction of freedom to comply with the second constraint in a manner that does not result in non-compliance with the first constraint (*e.g., the freedom vector tells the control point the direction it should move and the projection vector determines the desired distance projection between control points and these vectors are used in calculating the resulting vector for determining the new position of control point until a balanced of the diagonal stroke weight of letter "Y" is achieved; see column 9-10*).

Claim 15:

The claim 15 encompasses the same scope of invention as that of the claim 1 except additional claim limitation of receiving a set of control points representing a character of text. However, Kaasila further discloses the claim limitation of receiving a set of control points

representing a character of text (*e.g., the freedom vector tells the control point the direction it*

should move and the projection vector determines the desired distance projection between

control points and these vectors are used in calculating the resulting vector for determining the

new position of control point until a balanced of the diagonal stroke weight of letter "Y" is

achieved in which "Y" is a character of text; see column 9-10).

Claim 16:

Kaasila teaches that, in a computing system that has access to a set of control points, the

set of control points for representing an outline of a graphical object, a method for setting the

direction of freedom vectors for one or more of the controls points, the method comprising:

For each control point in the set of control points, determining the number of constraints

the control point is to comply with (*e.g., Delta exceptions permit user of font rendering engines*

to quickly correct and adjust the outlines of a glyph over a significant range of resolution to

enhance typeface with raster output devices at a resolution; the set of control points are

illustrated in 7-9 and the number of constraints the control point is to comply with are described

in column 7-10 in which the freedom and projection vector are means to move control points in

desired direction and to measure distances along the projection vector and these two vectors are

manipulated iteratively);

When the control point is to comply with one or more constraints:

Identifying a first projection vector corresponding to a first constraint, compliance with

the first constraint being determined by measuring a distance from the control point, in the

direction of the first projection vector, to another portion of the outline or to a pre-determined

location (*column 10, lines 1-45 in which the control point is iteratively adjusted in accordance*

with the font instructions and the freedom vector and projection vector are determined in which

the projection vector specifies a direction along which the difference in distance between the

original position of the control point and the desired position of the control point is measured

and the freedom vector specifies the direction a selected control point should move; the control

points are manipulated with freedom and projection vectors in a plurality of lines; Fig. 12);

Determining that the direction of the first projection vector is closer to the direction of a

first axis than to the direction of a second axis, the first axis being perpendicular to the second

axis *(column 10, lines 1-45)*; and

Setting the direction of a first freedom vector to the direction of the first axis, the first

freedom vector indicating a direction in which the control point can move to comply with the

first constraint *(e.g., column 9-10)*.

Claim 17:

The claim 17 encompasses the same scope of invention as that of the claim 16 except

additional claim limitation of determining the number of constraints the control point is to

comply with. However, Kaasila further discloses the claim limitation of determining the number

of constraints the control point is to comply with in the iterative process (column 9-10).

Claim 18:

The claim 18 encompasses the same scope of invention as that of the claim 16 except

additional claim limitation of determining that the control point is to comply with one constraint.

However, Kaasila further discloses the claim limitation of determining that the control point is to

comply with one constraint (column 10, lines 1-45).

Claim 19:

The claim 19 encompasses the same scope of invention as that of the claim 16 except additional claim limitation of determining that the control points is to comply with two constraints. However, Kaasila further discloses the claim limitation of determining that the control point is to comply with two constraints (column 10, lines 1-45).
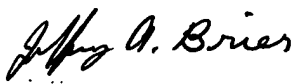
Claim 20:

The claim 20 is subject to the same rationale of rejection set forth in the claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrey A. Brier

JEFFERY A. BRIER
PRIMARY EXAMINER

jcw